

STATEMENT OF BASIS

as required by LAC 33:IX.2411, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0093611; AI18911; PER20090001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** Town of Greenwood
Greenwood Municipal Wastewater Treatment Facility
P.O. Box 195
Greenwood, LA 71033

- II. **PREPARED BY:** Darlene Bernard

- DATE PREPARED:** October 1, 2009

- III. **PERMIT ACTION:** Renewal of LPDES permit LA0093611, AI18911
LPDES application received: March 11, 2009

LPDES permit effective: September 1, 2004
LPDES permit expired: August 31, 2009
EPA has not retained enforcement authority

- IV. **FACILITY INFORMATION:**
 - A. The application is for the discharge of treated sanitary wastewater from an existing publicly owned treatment works serving the Town of Greenwood.
 - B. The permit application does not indicate the receipt of industrial wastewater.
 - C. The facility is located at 8922 E. Starwood Lane, in Greenwood, Caddo Parish.
 - D. The treatment facility consists of a manually cleaned screen, followed by a 1.5 acre Aeration Basin, followed by a two cell oxidation pond, followed by rock filtration, followed by disinfection.

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E. Outfall 001

Discharge Location: Latitude 32°25'28" North
 Longitude 93°56'26" West

Description: treated sanitary wastewater

Design Capacity: 0.45 MGD

Type of Flow Measurement which the facility is currently using:

Ultrasonic Flowmeter with Totalizer

V. RECEIVING WATERS:

The discharge is into an unnamed ditch, thence into an unnamed tributary, thence into Gilmer Bayou subsegment 100602 of the Red River Basin. Subsegment 100602 of the Red River Basin is listed on the 2006 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 100602 of the Red River Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment 100602	Degree of Support of Each Use						
	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Partial	Full	Full	Not Supporting	N/A	N/A	N/A	Full

^{1/}The designated uses and degree of support for Segment 100602 of the Red River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Volume 5, Part B, Water Quality Inventory respectively.

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VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 100602 of the Red River Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish & Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required..

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

The public notice is published in a local paper of general circulation and the Office of Environmental Services Public Notice Mailing List.

For additional information contact:

Darlene Bernard
Permits Division
Department of Environmental Quality
Office of Environmental Services
PO Box 4313
Baton Rouge, LA 70821-4313

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IX. PROPOSED PERMIT LIMITS:

Subsegment 100602, Boggy Bayou – From headwaters to Wallace Lake was listed on the court ordered 303(d) list of impaired waterbodies. The suspected causes of impairment are Organic Enrichment/low DO, Turbidity, and Nutrients. EPA approved two TMDLs for Boggy Bayou. They are as follows: DO and Nutrient TMDL on April 2, 2008; and Turbidity, Sediment, TSS, Chloride, Sulfate and TDS TMDL on April 19, 2007. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by any future TMDLs.

Turbidity

As per the TMDL, "The suspended solids discharged by point sources in subsegments 100602 and 100603 are assumed to consist primarily of organic solids rather than inorganic solids. Discharges of organic suspended solids from point sources are already addressed by LDEQ through their permitting of point sources to maintain water quality standards for DO. The WLAs to support these turbidity, TSS and sediment/siltation TMDLs will not require any changes to the permits concerning suspended solids". To protect against the potential for the introduction of suspended solids into the receiving waterbodies, TSS limits have been established in the permit.

Organic enrichment/low DO

As per the TMDL, "Most of the oxygen-demanding discharges are far away from Boggy Bayou such that they are not expected to affect DO concentrations in Boggy Bayou. The nonconservative behavior of DO allows many small, remote point source discharges to be assimilated by the receiving waterbodies before they reach the modeled waterbody. These discharges are said to have little to no impact on the modeled waterbody and therefore, they are not included in the model and are not subject to any reductions based on this TMDL. These facilities are permitted in accordance with state regulation and policies that provide adequate protective controls."

Nutrients

As per the TMDL, "When oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited." The previous permit had report for Ammonia-Nitrogen, however, since the issuance of the previous permit, a TMDL has been completed and as a result of this TMDL, the reporting requirement for Ammonia-Nitrogen has been removed.

The previous permit contained reporting requirements for Oil & Grease. These reporting requirements were for informational gathering purposes because the receiving waterbody was listed as impaired for oil & grease. However, since the issuance of the previous permit, a TMDL has been completed and as a result of this TMDL, the reporting requirement for oil & grease has been removed from the permit.

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Final Effluent Limits:

OUTFALL 001

Final effluent limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
BOD ₅	37.5	10 mg/l	15 mg/l	Limits are set in accordance with the Statewide Sanitary Effluent Limitations Policy (SSELP) for facilities of this treatment type and size.
TSS	56.3	15 mg/l	23 mg/l	Since there are no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.a, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgment in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

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2) pH

According to LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No LA0093611: Issued: August 25, 2004
Effective: September 1, 2004
Expired: August 31, 2009

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (Design 0.45 MGD)

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
CBOD ₅	10 mg/l	15 mg/l	2/month	Grab
TSS	15 mg/l	23 mg/l	2/month	Grab
Ammonia-Nitrogen	Report	Report	1/quarter	Grab
Oil & Grease	---	Report	1/quarter	Grab
Fecal Coliform	200	400	2/month	Grab
pH	6-9 Standard Units		2/month	Grab

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of EDMS indicates the following inspections were performed for this facility:

Date – February 28, 2007
Findings and/or violations:

An incident investigation was conducted as a result of a sewage overflow from a lift station, (approximately 100-200 gallons). The area affected by the sewage overflow was remediated at the time of the investigation. No areas of concern were noted.

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Date – March 30, 2007

Findings and/or violations:

An incident investigation was conducted as a result of mechanical failure causing a lift station overflow. Contact was made via telephone. It was indicated that the overflow was found by the Town of Greenwood during a routine maintenance check at the pump station on the corner of 70th St. and Kimberly Rd. During the routine maintenance check it was found that contactors on the starter to the pump station malfunctioned. This then contributed to the overflow. The contactors were repaired and new contactors are on order. All solids left from the spill were remediated. The affected soil/ground was flushed with fresh water and then disinfected with bleach. Also a deodorizer was put down in the affected area.

Date – August 6, 2007

Findings and/or violations:

An incident investigation was conducted as a result of a lift station overflow. Upon arrival, it was noted that a lift station was down and sewage (a grey colored water) was being discharged into an unnamed creek. Mr. Blankenship with the Town of Greenwood stated that the station was checked the day before at 9:45 am and at that time it was running correctly. He also stated that the overflow was caused by a pump failure. A phone call was made to Mr. Blankenship on 08/07/2007 to receive an update of the situation. He stated that the pump was fixed about 11:30 am on 08/06/07. He also stated that a material called Refresh was applied to the creek in order to control the odor.

NOTE: Enforcement referral form was submitted by surveillance to enforcement On 08/07/07.

Date – November 6, 2007

Findings and/or violations:

A facility inspection was done as a result of a citizen's complaint that the Town of Greenwood personnel are removing rocks from their wastewater treatment plant (WWTP-oxidation ponds) and using them to build a road. An on-site investigation was conducted on November 7, 2007 with the WWTP Superintendent. The Superintendent said the old rocks were being removed due to blockage/clogging of the rocks. The old rocks were placed on top of the WWTP's levee roads and a small section of the WWTP's eastern levee wall. Another small amount of sludge rocks were placed on The Town's property on Tallwood Road near the dead end of the SE corner of the WWTP. The rocks were first sprayed with water and a chlorine/water solution. After they were placed on the road and levees approximately 10 tons of lime was deployed for pathogen and vector attraction reduction. This is a requirement for surface disposal of sludge waste under regulation 40 CFR Part 503, subpart C. pH soil sample readings were taken two weeks later as part of a follow-up investigation (11/20/07) to determine adequate pathogen and vector attraction reduction. PH readings were >10 s.u. at all areas of sludge rock disposal. No water or sludge

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runoff was noted from the site or in nearby drainage ditches. The Superintendent said they would comply with any additional sludge wasting requirements if necessary.

Date – September 10, 2008

Findings and/or violations:

A Hurricane Assessment was done to assess damages from Hurricane Gustav. There were no damages or flooding to the facility as a result of the Hurricane. There was no power loss.

B) Compliance and/or Administrative Orders

A review of EDMS revealed that there was a Notice of Corrected Deficiency on file as a result of an August 6, 2007 inspection.

C) DMR Review

A review of the discharge monitoring reports for the period beginning January 1, 2007 through June 30, 2009 revealed the following violations:

Date	Parameter	Monthly Average (mg/l)	Weekly Average (mg/l)	Monthly Average (lbs/day)
01-07	CBOD ₅	17.1 MG/L	19.2 mg/l	47.6 lbs/day
03-07	pH CBOD ₅ Fecal Coliform	5.80 min 12.6 mg/l	16.7 mg/l 1600 col/100 ml	
07-07	CBOD ₅	14.6 mg/l	18.8 mg/l	
08-07	CBOD ₅	14.2 mg/l	18.1 mg/l	
09-07	CBOD ₅	17.6 mg/l	17.8 mg/l	
10-07	TSS	24.2 mg/l	43.6 mg/l	
11-07	CBOD ₅ TSS	12.1 mg/l 28.4 mg/l	18.7 mg/l 32.4 mg/l	
12-07	CBOD ₅ TSS	14.4 mg/l 19.4 mg/l	15.9 mg/l 27.6 mg/l	
01-08	CBOD ₅	20.7 mg/l	36.6 mg/l	
02-08	CBOD ₅	31.1 mg/l	48.3 mg/l	86.1 lbs/day
03-08	pH CBOD ₅	5.94 min. 15.1 mg/l	21.1 mg/l	
04-08	CBOD ₅	21.3 mg/l	32.9 mg/l	
05-08	CBOD ₅	11.7 mg/l	15.4 mg/l	
09-08	CBOD ₅	11.3 mg/l		

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XII. ADDITIONAL INFORMATION:

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.45 MGD.

Effluent loadings are calculated using the following example:

$$\text{BOD: } 8.34 \text{ gal/lb} \times 0.45 \text{ MGD} \times 10 \text{ mg/l} = 37.5 \text{ lb/day}$$

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.1 and 0.5 MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow	Continuous	Recorder
BOD ₅	2/mo.	Grab
Total Suspended Solids	2/mo.	Grab
Fecal Coliform Bacteria	2/mo.	Grab
pH	2/mo.	Grab

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, it is recommended that LDEQ Option 1 Pretreatment Language be included in LPDES Permit LA0093611.

This language is established for municipalities that do not have either an approved or required Pretreatment program. This recommendation is in accordance with 40 CFR Part 403 regulations, the General Pretreatment Regulations for Existing and New Sources of Pollution contained in LAC Title 33, Part IX, Chapter 61 and the Best Professional Judgement (BPJ) of the reviewer.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. Please make additional copies to be utilized for each year of this permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

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The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan, Vol. 10, "Wasteload Allocations and Discharger Inventory", Louisiana Department of Environmental Quality, 1992.

Louisiana Water Quality Management Plan, Vol. 5-B, "Water Quality Inventory", Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards", Louisiana Department of Environmental Quality, 1999.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 23 - "The LPDES Program", Louisiana Department of Environmental Quality, 1999.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Town of Greenwood, Greenwood Wastewater Treatment Facility, March 11, 2009.